

DOCUMENT RESUME

ED 095 173

95

SP 008 353

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TITLE	Appendix to First Year Data of Texas Teacher Effectiveness Project: Complex Relationships Between Teacher Process Variables and Student Outcome Measures.
INSTITUTION	Texas Univ., Austin. Research and Development Center for Teacher Education.
SPONS AGENCY	National Inst. of Education (DHEW), Washington, D.C.
PUB DATE	[74]
CONTRACT	OEC-6-10-108
NOTE	96p.; For related document, see ED 091 394
EDRS PRICE	MF-\$0.75 HC-\$4.20 PLUS POSTAGE
DESCRIPTORS	*Academic Achievement; *Data; Effective Teaching; Grade 2; Grade 3; *Learning; Linear Programming; Socioeconomic Status; *Statistical Data; *Teacher Behavior

ABSTRACT

This report supplements two earlier 1973 reports by the authors concerning process product relationships in the first year of the Texas Teacher Effectiveness Project. The present report supplements the linear correlations given in the earlier reports by presenting nonlinear relationships in these data. Many such relationships indicate that optimal teaching in low socioeconomic status schools differs in many ways from optimal teaching in high socioeconomic status schools. A narrative section of 13 pages is followed by: Table 1, Process Variables Correlating Positively in Title I Schools But Negatively in Non-Title I Schools with Product Criteria; Table 2, Process Variables Uncorrelated with Product Criteria in Title I Schools But Negatively Correlated in Non-Title I Schools; Table 3, Process Variables Correlating Negatively in Title I Schools But Positively in Non-Title I Schools with Product Criteria; Table 4, Process Variables Uncorrelated with Product Criteria in Title I Schools But Correlated Positively in Non-Title I Schools; and Table 5 Process-Product Relationships in Title I and Non-Title I Schools. (Authors)

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Appendix to First Year Data of Texas Teacher Effectiveness Project:Complex Relationships between Teacher Process Variables and Student Outcome Measures¹

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This study was supported in part by National Institute of Education Contract OEC 6-10-108, Research and Development Center for Teacher Education. The opinions expressed herein do not necessarily reflect the position or policy of the National Institute of Education and no official endorsement by that office should be inferred.

The authors wish to acknowledge and thank Don Veldman for his statistical design suggestions; Shyam Ahuja, Marilyn Arnold, Jim Blackwell, Maria Buczynski, John Crawford, Susan Florence, Teresa Harris, Carol King, Karen Mays, Mark Mays, Nancy Moore, Piara Pannu, Brian Peck, Kathleen Senior, Carol Watkins, Michael Weissberg, and Andrea Winter for their help in classroom coding and data preparation; John Sheffield and Jim Sherrill for their help in data analysis; and Marilyn Arnold and Karen Mays for help in manuscript preparation. Particular recognition is extended to Nancy Moore, who developed the small group instruction observation system used in this research.

Appendix to First Year Data of Texas Teacher Effectiveness Project:Complex Relationships between Teacher Process Variables and Student Outcome Measures

The present report contains data to supplement those contained in two earlier reports (Brophy and Evertson, 1973; Evertson and Brophy, 1973) which contain zero order correlation coefficients relating teacher process variables (both high and low inference) to student residual gain scores on the word knowledge, word discrimination, reading, arithmetic computation, and arithmetic reasoning subtests of the Metropolitan Achievement Tests. The data were taken in the classrooms of a pool of 31 second and third grade teachers specially selected because they had shown consistency across four years in the relative amounts of student learning gains that they produced on the Metropolitan tests (see Brophy and Evertson, 1973, for details). Correlation coefficients relating each process variable to each product outcome variable were presented for the total group of teachers (maximum N equal 31), for teachers working in Title I schools (maximum N equal 13), and for teachers working in non-Title I schools (maximum N equal 18). Although most N's were at or near the maximum, some were considerably lower because the process variable involved was not observed and thus could not be coded in several classrooms.

One of the major findings running throughout the data of the two previous reports was that variables which correlated with student learning gain in Title I schools often did not correlate with learning gain in non-Title I schools, and vice versa. These data, along with the work of Soar and his colleagues (Soar, 1972), which showed that certain process-product relationships are significant but nonlinear, led us to supplement our original correlational analyses with the present set of analyses planned to identify process-product relationships in our own data which are more complex than simple zero order correlations. Using a

program developed by Dr. Donald Veldman of the Research and Development Center for Teacher Education, these analyses used a series of regression models to successively test three null hypotheses regarding the relationships between the process variable and product criterion in both the Title I and non-Title I distributions:

- 1) Different quadratic slopes. A significant probability value here indicates that one or both of the process-product relationships (that is, the relationship within the Title I schools and/or the relationship within the non-Title I schools) is curvilinear, and, in addition, that the curves for the two distributions are significantly different from each other. This is the most complex kind of relationship tested. If this test does not prove statistically significant, as is typically the case, the following test is performed.
- 2) Common quadratic slopes. A significant probability value here indicates that the process-product relationship is curvilinear in both the Title I and the non-Title I distributions, and, in addition, that the curves representing the relationship in each of these two distributions do not differ significantly from each other. This may mean that the two distributions have essentially the same curve, or it may mean that the distributions have the same shaped curve, but with the curve rotated somewhat in one of the distributions so that it has the same shape as the other curve but does not completely overlap it. Such an effect would also register later as a significant linear slopes difference. If neither of these first two statistical tests is statistically significant, the implication is that no quadratic relationship exists between the process variable and the product criterion.

In this case, the next statistical test is performed.

3) Different linear slopes. A significant probability value for this test indicates that the process-product relationship is linear in both distributions, but the regression lines differ significantly from each other. This may mean a positive relationship in one group and a negative relationship in the other, or a strong positive or negative relationship in one group and little or no relationship in the other. These data usually could be inferred from the contrasting correlation coefficients presented in the previous two reports, but they are included in the present report so that interested readers will know which of these contrasting correlation coefficients did and which did not involve a significantly different linear relationship between the Title I and non-Title I distributions. These inferences cannot always be made safely from the data in the previous two reports, because many apparently strong correlations are not statistically significant when a very small number of teachers were included on the measure involved.

Organization of the Present Report. To avoid needless and lengthy repetition concerning the background of the study and the zero order correlations among process and product variables in the sample as a whole and in the Title I and non-Title I schools, much of this information has been omitted from the present report. Thus, the present report is written as a supplement to the previous two, and readers should consult these previous reports before reading the present one if they have not already done so. The relationships to be described should be readily understandable whether or not one has read the previous reports, but in drawing implications from them, one needs to view them in the broader context of the findings of the study as a whole, and for this one needs the previous

reports as background information.

To simplify the presentation, linear relationships have been grouped according to their form rather than according to the variables involved. For example, many of the relationships showing significantly different linear slopes for the two distributions involve a positive correlation between the process variable and the product criterion in the Title I distribution and a negative correlation in the non-Title I distribution. For convenience, and to eliminate unnecessarily repetitious verbal description of the nature of such relationships, all process-product relationships of this type are presented together. Similarly, relationships involving no relationship in the Title I schools but a significant negative relationship in the non-Title I schools are presented together, and so on. The linear relationships to be described will be grouped in this way. The nonlinear relationships, which are often difficult to describe and interpret, will be presented in visual form in Table 5. Discussion of these data will be delayed until replication data from the second year of the study are available.

To save space in the tables, the product criteria will be identified with initials only: WK = word knowledge, WD = word discrimination, R = reading, AC = arithmetic computation, and AR = arithmetic reasoning. Also, decimal points have been omitted from the correlation coefficients.

Process Variables Correlating Positively in Title I Schools and Negatively in Non-Title I Schools. Tables 1-4 contain information about variables showing contrasting linear slopes in the two distributions. Process variables which were positively correlated with student learning gains in Title I schools but negatively correlated in non-Title I schools are shown in Table 1. Usually one or both of the zero order correlations reached statistical significance, but not always.

In cases where neither zero order correlation was statistically significant, the direction of correlation was still opposite in the two groups and sufficiently strong to produce a significant effect in the test for contrasting linear slopes.

The Table 1 data elaborate points already made in the previous papers: Students in Title I schools did better with well-planned, teacher-dominated instruction, while students in non-Title I schools did better with student-centered, indirect instruction; maintenance of control and general management were important in both groups but especially important in the Title I schools; students in the non-Title I schools needed to be challenged with difficult questions and could be adequately and even optimally handled with brief feedback, while students in Title I schools needed to be "overtaught," requiring longer feedback and more individual attention. Calling on volunteers apparently was a successful strategy in non-Title I schools, presumably because the students were highly motivated, while teachers in Title I schools often had to preselect the respondent rather than call on a volunteer in order to insure wide participation.

Table 2 shows variables which usually were uncorrelated with product criteria in the Title I schools but were negatively correlated in the non-Title I schools. Many of these relationships are unsurprising, although some deserve comment. Note that the percentage of correct answers is negatively correlated with student learning gains in the non-Title I schools, again pointing up the need for teachers to challenge these children with difficult material rather than to overdo it to the point of needless drill. The negative correlations between the frequency with which teachers thanked children for carrying out management

requests was unexpected, although the contrast between Title I and non-Title I schools on this variable bears out St. John's (1971) findings that child orientation is more important for teachers working with disadvantaged children. In any case, in non-Title I schools this expression of politeness and courtesy was negatively associated with student learning gains.

The group difference on the measure of repeating the question versus rephrasing the question or asking a new question probably reflects a difference in the difficulty level of questions asked at the two kinds of schools. Repeating the question was uncorrelated with student learning gains in the Title I schools, where more of the questions were probably at an easier or more basic level, but it had a strong negative correlation in the non-Title I schools. Most probably, repetition of a question that was not answered the first time by a student in a non-Title I school was tantamount to pointless pumping of the student, so that provision of help in the form of rephrasing the question or asking a new question was more appropriate than simply repeating the original question.

The data for criticism following failure to respond and behavioral criticism following student-initiated comments (criticizing the student for having called out a comment without raising his hand) probably are related to the point made above. Again, most probably the majority of times when a student in a non-Title I school did not answer, he did not know the answer and could not respond, so that criticism was unfair and unjust. Similarly, most probably the majority of student-initiated comments made in these schools were relevant to the topic, so that criticism was probably inappropriate in most cases, although a short reminder concerning the rules about calling out comments might have been appropriate. In contrast, failures to respond among Title I students probably were more often

inappropriate or irrelevant. Even where they were relevant, classroom management was a greater problem in the Title I schools, so that criticism might have been more appropriate if the teacher were dealing with a continuing problem of students' failure to raise their hands and wait their turn rather than just calling out answers at will.

The data regarding teacher failure to give feedback after the student responded to an opinion question are puzzling, in that negative relationships were expected in the Title I schools, where the students are generally less likely to know whether or not their response is appropriate or correct than are students in non-Title I schools. However, failure to give feedback was highly negatively correlated with learning gains in the non-Title I schools but was uncorrelated with learning gains in the Title I schools.

The negative correlation between praise of student-initiated comments and student learning gains in the non-Title I schools, although surprising, is but one of a large number of similar findings regarding praise in this study. Despite the near-unanimous stress on the importance of praising students, the present investigation regularly found teacher praise to be either uncorrelated or negatively correlated with measures of student learning gains. See Brophy and Evertson (1973) for a more complete discussion of this topic.

Table 3 contains variables which correlated negatively with learning gains in Title I schools, but positively in non-Title I schools. These are related to many of the data in Table 1, and again stress the importance of management and of providing individualized feedback and good instruction to students in Title I schools. Thus, Title I teachers could not merely wait for attention and expect to get it; they had to use more active methods. Further, they could not delay explanations; the children in these schools needed immediate explanations in order to proceed with their work. They could not just call on volunteers,

since this would have restricted the discussion to a relatively small number of children who were highly motivated and competent. Also, they had to "over-teach." Too much questioning, relative to explanation and demonstration, was maladaptive in Title I schools, and relatively high frequencies of wrong answers were negatively correlated with student learning gains in these schools, even though they were positively correlated with learning gains in the non-Title I schools.

The reading group data show the importance of the teacher in a Title I school staying with a student who has made a mistake, providing him with help by rephrasing the question or giving a clue rather than simply repeating the question, giving the answer, or moving on to someone else. This is part of a larger pattern shown on a great number of measures from our study suggesting that it is of primary importance for teachers in Title I schools to get a response from the student with whom they are dealing at the time; whereas, in non-Title I schools, it is primarily important that the teacher get the answer to the question she has asked, but not particularly important that she get the answer from the student who was asked the question originally.

In other words, students in non-Title I schools apparently learn just as well whether they answer questions themselves or whether they observe and listen while someone else answers. However, sustained interaction with the teachers in which they themselves respond appears to be an important experience for the students in Title I schools.

The final variable, indicating a negative relationship between integrating relevant student-initiated comments into the discussion and student learning gains in Title I schools, contradicts directly much of the typical advice given to teachers, particularly the stress on the use of student ideas. Our data suggest that, while such advice may be useful for teachers in non-Title I schools, in

Title I schools the importance of maintaining classroom control supercedes the importance of variables such as use of student ideas. Apparently, teachers in the Title I schools were continually bombarded with student-initiated comments, and teaching the students to raise their hands first and get teacher recognition before calling out a comment was one of the major control problems facing them. Consequently, integration of student-initiated comments, even relevant ones, was negatively correlated with learning gains in these schools.

Table 4 contains variables that were uncorrelated with student learning gains in Title I schools but which were positively correlated with learning gains in non-Title I schools. Most of these involve provision of process feedback, and the contrasting pattern between the two types of schools probably reflects both the kinds of activities going on in the schools and the capacity of the students to benefit from extended explanations. Students in the non-Title I schools probably were more likely to benefit from such extended process explanations, and they were dealing with more difficult and higher level material which leant itself to more frequent and more appropriate use of such explanations. Hence the difference in correlations. The data on criticism after wrong answers again points up the importance of challenging the students in non-Title I schools but providing emotional support and warmth for students in the Title I schools. Even though teacher praise did not have the expected positive correlations with learning gains, teacher criticism did have the expected negative correlations. Apparently, the students did not need or want positive teacher reactions in the form of praise, but at the same time they were negatively affected by overreactive and inappropriate criticism from the teacher. In general, a nonevaluative, stick-to-the-business-of-learning approach seemed to be the optimal one.

These linear patterns in Tables 1-4 are also shown in Table 5, along with

data from all of the other process variables. The preceding discussion covered only those process variables which showed contrasting linear relationships to product criteria in the two distributions. These relationships are relatively straightforward and easy to discuss, compared to most of the nonlinear relationships shown in Table 5 below. Table 5 contains process-product relationship data for Title I and non-Title I schools for every process variable included in the study. These data are from the three successive regression analyses described above, and are presented for inspection by our research colleagues. Comments and suggestions concerning them (or any other aspect of the study) are welcomed. For the present, the data are presented without comment or interpretation. This is because: the data concern a large number of process variables, but only 31 teachers were studied, so that p-values are only suggestive; the relationships are sometimes difficult to interpret meaningfully; the entire study is being replicated. Thus, interpretation of these nonlinear relationships will be withheld pending the results of the replication study.

Table 5 has been prepared so as to convey a maximum of information in a minimum of space. Consequently, several conventions have been adopted to conserve space. The following information about the table must be clearly understood if the table is to be read accurately:

- 1) Abbreviations have been used for the five Metropolitan Achievement Tests (WK = word knowledge; WD = word discrimination; R = reading; AC = arithmetic computation; AR = arithmetic reasoning).
- 2) Decimal points have been omitted from all correlation coefficients.
- 3) Variable numbers refer to the tables in the two previous reports (Brophy and Evertson, 1973; Evertson and Brophy, 1973). Thus, Variable 3.6 refers to the sixth variable in Table 3 of the Evertson and Brophy paper (Variables 1.1 through 4.38 are high-inference variables from the

Evertson and Brophy paper; Variables A1 through R141 are low-inference variables from the Brophy and Evertson paper -- M = morning; A = afternoon; R = reading group).

- 4) The three statistical tests used were in sequential order of precedence (different quadratic slopes test first, common quadratic slopes test second, different linear slopes test third). If more than one of these tests were significant at the p = .10 level or lower, data from the first significant test are given in the table because they represent the best fits for regression lines in the two distributions (Title I and non-Title I schools).
- 5) A cross containing four quadrants for statistical information appears for each possible process-product relationship. Data for Title I schools appear in the two left quadrants, and data for non-Title I schools in the two right quadrants. Data for linear relationships appear in the two upper quadrants, and data for non-linear relationships in the two lower quadrants. The number below the cross is the squared Multiple R indicating the percentage of variance in the product scores accounted for by the process variable.
- 6) Data were entered in the table as follows:
 - a) Where statistical tests could not be run because of low N, or where N fell below 6 in one of the groups, the letters ND (No Data) appear.
 - b) Where statistical tests were run but no relationship reached the .10 level of significance, the quadrants are empty, although the squared Multiple R appears below.
 - c) Where a nonlinear test reached the .10 level of significance, curves showing the nature of the relationship in each of the two distributions

are shown in the two lower quadrants. Here there are no correlations coefficients in the upper quadrants, because these are based on linear regression slopes and the test indicates that curvilinear slopes provide a better fit. Thus, the curves shown reflect the process-product relationships most accurately, and they take precedence over the zero order Pearson r's presented in the two earlier papers.

- d) Where neither curvilinear test reached the .10 significance level but the linear test did, the quadrants show both lines indicating the nature of the relationship (lower quadrants) and the corresponding Pearson r's (upper quadrants), as well as the squared Multiple R.
- e) Sometimes none of the four tests reached the .10 level of significance but one or both of the Pearson r's did. In these instances, the Pearson r's appear in the upper quadrants but no lines appear in the lower quadrants.

In sum, Table 5 contains the most precise information available on process-product relationships involving process variables included in the first year of our research. Where a relationship significant at the .10 level or below appeared, it is shown in the table. Otherwise, the data for a given relationship contain either: only the squared multiple R, where N was large enough to allow analysis but no significant relationships appeared; or "ND," indicating that N was too low to allow analysis or interpretation.

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Table 1. Process Variables Correlating Positively in Title I Schools, but Negatively in Non-Title I Schools with Product Criteria.

Variable			r's for Criterion	r's for Title I	r's for non-Title I
<u>Number</u>	<u>Process Variable</u>				
1.1	Chaotic, Unplanned, Poorly Scheduled		AC	46	-48*
1.2	% of Time Spent in Reading Groups		WD	54*	-37
1.3	% of Time Spent in Reading Groups		R	39	-40*
1.4	% of Time Spent in Reading Groups		AC	52*	-42*
1.5	% Preselects Respondent before Question - A.M.		AC	45	-35
1.6	% Answers Called Out by Students - A.M.		R	55	-39
1.7	% Answers Called Out by a Second Student after the First Student Failed to Answer - A.M.		R	36	-50**
1.8	% Relevant Student-Initiated Questions Given Long Feedback - A.M.		WK	54	-56**
1.9	% Student-Initiated Contacts Given Long Feedback-A.M.		WD	41	-47*
1.10	% Correct Answers in Reading Group		R	35	-39
1.11	% Asks New Question after Correct Answer-Reading Group		R	35	-48*
1.12	% Asks New Question after Correct Answer-Reading Group		AC	59**	-26
1.13	% Asks New Question after Part-Correct Answer - Reading Group		R	33	-58**
1.14	% Asks New Question (across all responses) - Reading Group		R	34	-52**
1.15	% Asks New Question (across all responses) - Reading Group		AC	59**	-31
1.16	% Relevant Student-Initiated Questions Not Accepted - Reading Group		AC	61*	-65**
1.17	Teacher-Initiated Work Contacts with Long Feedback - Reading Group		R	47	-56**

*p < .10

**p < .05

Table 2. Process Variables Uncorrelated with Product Criteria in Title I Schools but Negatively Correlated in Non-Title I Schools.

Variable Number	Process Variable	Criterion	r's for Title I	r's for non-Title I
2.1	Warning, Repetitive, Monotonous Assignments	WK	.27	-.41*
2.2	Incorrect Answer - A.M.	AC	-.14	-.62**
2.3	Student-Initiated Contacts Involving Personal Concerns rather than Work - A.M.	R	-.04	-.65**
2.4	Teacher Thanks Student Following Management Request - A.M.	WK	.50*	-.45*
2.5	Teacher Thanks Student Following Management Request - A.M.	R	.13	-.75**
2.6	Repeat/Repeating+Rephrase+New Question - A.M.	WK	-.14	-.71**
2.7	Repeat/Repeating+Rephrase+New Question - A.M.	AR	.21	-.67**
2.8	Choice Function/Process+Product+Choice Question-P.M.	P	.10	-.43
2.9	Repeats Question after Part-Correct Answer - P.M.	P	-.34	-.66**
2.10	Repeats Question after Part-Correct Answer - P.M.	AC	-.57*	-.67**
2.11	Criticizes Following Failure to Respond - P.M.	AC	.33	-.64**
2.12	Praise of Relevant Student-Initiated Comment - P.M.	AC	-.03	-.63**
2.13	Relevant Student-Initiated Comments Accepted - P.M.	AR	-.51	-.51**
2.14	Behavioral Criticism after Relevant Student-Initiated Comment - P.M.	WK	.16	-.45*
2.15	Behavioral Criticism after Relevant Student-Initiated Comment - P.M.	P	.30	-.40**
2.16	Behavioral Criticism after Relevant Student-Initiated Comment - P.M.	AC	.30	-.40**
2.17	Behavioral Criticism after Irrelevant Student-Initiated Comments - P.M.	**	.67	-.67**
2.18	Behavioral Criticism after Irrelevant Student-Initiated Comments - P.M.	AC	.19	-.66**

<u>Variable</u>			<u>r's for</u>	<u>r's for</u>
<u>Number</u>	<u>Process Variable</u>	<u>Criterion</u>	<u>Title I</u>	<u>non-Title I</u>
2.19	Behavioral Criticism after Relevant Student- Initiated Comment - Reading Group	WK	-46	-46*
2.20	Behavioral Criticism after Relevant Student- Initiated Comment - Reading Group	AC	47	-50*
2.21	behavior Criticism after Relevant Student- Initiated Comment - Reading Group	AR	-67	-56
2.22	% No Feedback after Opinion Questions - Reading Group	WK	-08	-61*
2.23	% No Feedback after Opinion Questions - Reading Group	AC	44	-78**
2.24	% Criticism in Student-Initiated Work Contacts	R	33	-51*
2.25	% Criticism in Student-Initiated Work Contacts	AC	-24	-66*

*p < .10

**p < .05

Table 3. Process Variables Correlating Negatively In Title I Schools but Positively in Non-Title I Schools with Product Criteria.

Variable			<u>r</u> 's for	<u>r</u> 's for
Number	<u>Process Variable</u>	<u>Criterion</u>	<u>Title I</u>	<u>non-Title I</u>
3.1	Says Nothing, Waits as Method of Getting Attention	R	-27	45*
3.2	Delays, Explains Later if Child Doesn't Understand	WK	-66**	52**
3.3	Delays, Explains Later if Child Doesn't Understand	AC	-42	35
3.4	% Calls on Volunteers - A.M.	R	-62**	44*
3.5	% Calls on Volunteers - A.M.	AC	-55**	58**
3.6	New Question after Correct Answer - A.M.	WK	-58**	32
3.7	% Relevant Student-Initiated Comments Integrated into the Discussion - A.M.	AC	-79*	22
3.8	Brief/Brief+Long Feedback - A.M.	R	-51*	38
3.9	Brief/Brief+Long Feedback - A.M.	AC	-44	45*
3.10	Choice Questions/Product+Process+Choice - Reading Group	AC	-81**	35
3.11	% Wrong Answers - Reading Group	WK	-39	44*
3.12	% Wrong Answers - Reading Group	AC	-60**	36
3.13	% Wrong Answers - Reading Group	AR	-82**	46*
3.14	Process Feedback to Part-Correct Answers-Reading Group	R	-44	45*
3.15	Calls on Another Child after Wrong Answer - Reading Group	R	-41	39
3.16	Gives Answer after Failure - Reading Group	WK	-41	40
3.17	Calls on Another Child after Failure - Reading Group	WK	-24	55*
3.18	Calls on Another Child after Failure - Reading Group	R	-51*	51**

* $p < .10$

** $p < .05$

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
9	High Student Withdrawal, Passivity, or Aimless or Repetitive Behavior	02	01	04	01	
10	Clarity: Students Show Clear Understanding of Teacher Presentations	04	03	06	04	02
11	Enthusiasm: Teacher Shows Enthusiasm, Excitement, Enjoyment	00	11	00	00	01
12	Convergent Questioning: Most Questions Have Clear-Cut Correct Answers	06	04	00	00	
	A. Methods of Handling Catch-up Work					
	No Remediation; Child Skips Missed Work	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
	Child Must Make Up Work but Is Not Given Help	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
	Teacher Explains Work and Has Child Do Part of It.	07	03	03	04	ND ND ND
	Another Child is Assigned to Help	01	00	02	02	00 02

Table 4. Process Variables Uncorrelated with Product Criteria in Title I Schools but Correlated Positively in Non-Title I Schools.

Variable			<u>r</u> 's for	<u>r</u> 's for
Number	<u>Process Variable</u>	<u>Criterion</u>	<u>Title I</u>	<u>non-Title I</u>
4.1	Criticism Following Wrong Answers - A.M.	WK	-23	43*
4.2	Process Feedback Following Wrong Answers - A.M.	WK	-39	43*
4.3	Process Feedback Following Wrong Answers - A.M.	R	03	48*
4.4	Process Feedback (across all responses) - A.M.	WK	-19	43*
4.5	Process Feedback (across all responses) - A.M.	R	08	55**
4.6	Process Feedback (across all responses) - A.M.	AR	-32	50**
4.7	Process Feedback Following Correct Answers - P.M.	R	-19	50**

*p < .10

**p < .05

Table 5. Process-Product Relationships in Title I and Non-Title I Schools.

umber	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
1	High Level of Student Attention	+	+	20 27 10* 07	+	+
2	Teacher Often Addresses Questions or Problems to the Whole Class	+	29 31 05 13*	+	+	+
3	Teacher is Task Oriented, Doesn't Waste Time	+	47 12 07 09*	17 24 10*	+	+
4	Frequent Pupil-to-Pupil Interaction (Class Relevant)	+	+	+	59** 65 01 13*	+
5	% of Time Teacher Lectures or Demonstrates	30 33 13**	22 41 16**	+	+	+
6	Negative Affect: Criticism, hostility	+	+	03 00	+	+
7	Positive Affect: Praise, Support	+	+	01 03	+	+
8	Requires High Level of Generalization, Inference, or Explanation	+	+	04 00	+	+

Table 5, Continued.

Order	Process Variable	Word	Word	Reading	Arithmetic	Arithmetic
		Knowledge	Discrimination	Computation	Reasoning	Reasoning
1	Skills Put in Cluster Group					
2	Temporary	ND ND ND	ND ND ND	ND ND ND	ND 1.5 ND	ND ND ND
3	Other	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
4	B. Rules Regarding Physical Movement					
5	Must Always Get Permission to					
6	Leave Seat	00	03	22**	14*	01
7	One at a Time Without Per- mission	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND 1.5 ND
8	As Many as 4 or 5 without Permission	ND ND 00	ND ND 00	ND ND 01	-61* ND 11*	ND ND 01
9	Can Go Quietly to Specified Places without Permission at any Time	-50* 15 00	ND 13*	00	00	1.5 01
10	No Restrictions	00	00	00	00	24*
11	Some Children Allowed Free Move- ment but not Others	ND ND 06	ND ND 03	ND ND 05	ND ND 00	ND ND 01

Table 5, Continued.

	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
13	Only Monitors Allowed Free					
	Movement	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
14	Other	-43 -49 24*	-45 -27 12*			
				07	07	ND -37
15	C. Punishments Used by Teacher					
	Stay after School					
		01	00	78** 11 09*	03	02
16	Spanking					
		04	01	01	00	ND
7	Writing Sentences on Board					
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
8	Isolation within the Classroom					
		01	18* 17**	02	17** 18*	
9	Removal from the Classroom					
		00	01	00	01	00
0	Note to Parents					
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND

Table 5, Continued.

Per	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
1	Send to Principal	+	+	+	+	+
		00	00	01	00	00
2	Extra Reading, Math, Etc.					
	Work	ND ND 04	ND ND 00	ND ND 01	ND ND 02	ND ND 01
3	Peer Pressure (e.g. "You lost the race for your group.")	+	+	+	+	+
		01	00	23**	15*	00
4	Scolding	+	+	+	+	+
		01	00	00	02	03
5	Discussion of Incident (No Scolding)	-25 38 15*	+	ND 05	+	-80 44* 22*
		00	00	00	00	
6	Other	+	+	22 29 10*	+	+
		05	01	01	01	01
7	D. Rewards Used by Teacher					
	Classmates Clap or Cheer	+	+	+	+	+
		25**	25	29**	39**	46**
8	Special Privileges	+	+	+	+	+
		01	01	03	00	ND

Table 5, Continued.

Number	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
29	Waiver or Reduction of Assignments	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
30	Symbols (Stars, Smiling Faces, etc.)	00	00	02	00	20*
31	Token Redeemable for other Rewards	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
32	Concrete (Candy, Money, Prizes)	00	03	04	02	01
33	Jobs (Monitor, Helper, Eraser Cleaner)	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
34	Public Recognition (Gets to Read or Work Problem on Board)	03	01	07	01	00
35	Other	02	02	06	01	00
36	E. Appropriateness of Assignments Too Short or Easy	05	03	00	27 - 35 10*	01

Table 5, Continued.

umber	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
37	Boring, Repetitive, Monotonous	27 45* 20**	00	15* 17*	17	17
38	Too Hard: Students Can't Get Started or Continually Need Help	01	02	04	00	00
39	Continues Activity Too Long, until It Gets Boring	08	05	06	01	00
40	No Inappropriate Assignments	09	05	20 40 16**	28 44* 12*	06
F. Distractions: What Do Students Do When not Working?						
41	Use Washroom	00	01	00	00	05
42	Repeatedly Get Supplies for Free Time Activities	00	-59** 11 03	00	00	02
43	Watch Reading Group or other Activity	24* 00	00	-27 -35 12*	-31 -40* 17**	11
44	Talk	01	01	00	02	00

Table 5, Continued.

Index	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
45	Play	+	+	+	+	02** 13
46	Daydream	+	+	+	-48* 11	00
47	Ask for Help or Look More Closely at Work on Board	+	+	+	20* 05	00
48	Disrupt other Students	+	+	+	00	00
49	Other	+	+	+	-23 -40	04
50	G. Student Attitudes toward the Teacher When having Trouble Students	15*	03	13**	34*	
51	Concentrate or Seek Help	02	01	00	01	01
52	When having Trouble, Students Merely Copy from Neighbor	-68** -10 08	-68** -10 14*	05	01	01
53	Students Work as Well When not Watched as When Watched	01	01	27**	02	05

Table 5, Continued.

User	Process Variable	Word	Word	Arithmetic	Arithmetic
		Knowledge	Discrimination		
53	Students "Wet Up" When Unwilling	+	+	+	+
		00	04	00	00
54	Students Seem Amused by Teacher	+	+	+	+
		00	00	00	01
55	Students Seem to Fear Teacher	+	19 43*	67** 05	01 06
		01	05	05	01
56	Students Seem to Respect Teacher	+	+	+	+
		02	02	00	01
II. Free Time Materials Available (Not Necessarily Used)					
57	Books	-10 -45*	+	-28 -54**	-38 -30
		19	01	29*	10*
58	Learning Centers (Any)	+	+	+	+
		01	04	01	01
59	Listening Centers	+	+	+	U U
		00	00	00	15*
60	Visual (Picture Files, Filmstrips)	74** -12	+	+	+
		01	02	00	01

Table 5, Continued.

Inter	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
51	Science Demonstrations or Experiments	+	+	+	+	ND
52	Other Learning Centers	+	+	+	+	+
53	Coloring Pictures	+	+	+	+	+
64	Painting, Art Activities	+	+	33 -33	+	+
65	Games, (Any)	+	+	00	00	01
66	Instructional Games	-51* -01	+	+	+	+
67	Non-Instructional Games	+	+	01	01	01
68	Aquarium, other Looking Exhibits	+	+	02	16*	00

Table 5, Continued.

Item	Process Variable	Word	Word	Reading	Arithmetic Computation	Arithmetic Problem Solving
		Knowledge	Discrimination			
70	1. Free Time Materials Observed in Use					
	Books	+	+	+	+	+
		01	04	01	07	01
70	Learning Centers (Any)	+	+	+	+	+
		04	01	08	17*	01
71	Listening Centers	+	+	6.0**	02	+
		01	00	04	05	01
72	Visual (Picture Files, Film-strips)	58**	33	+	+	+
		16**	08	07	02	01
73	Science Demonstrations or Experiments	22*	22**	06	01	01
		22*	22**	06	01	01
74	Other Learning Centers	+	+	+	+	+
		04	00	09	02	01
75	Coloring Pictures	+	+	+	+	+
		02	01	01	01	01
76	Painting, Art Activities	+	+	+	+	+
		01	27**	20*	09	01

Table 5, Continued.

Row	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
77	Games (Any)	+	+	+	+	+
		00	02	00	00	01
78	Instructional Games	+	+	+	75	+
		00	02	02	15**	01
79	Non-Instructional Games	+	+	+	+	+
		00	03	00	00	29*
80	Aquariums, Other Looking Exhibits	+	70**-10 19**	+	+	+
		01		01	02	
81	Use of Peer Tutoring	+	+	+	+	+
		01	01	00	01	01
82	Assigns homework besides Seatwork	-26 38 15	+	-14 46* 12*	+	+
			02	03	01	01
83	Teacher Sometimes Underreacts to Control Problems, so Serious Problems go Unresolved	+	-52* 21 15*	+	+	+
		02		01	00	00
	Typical Affectionateness Level	+	+	+	+	+
		07	02	29*	34	01

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
2	Most Intense Affection Expression Observed	-52 44 25**	+	+	+	+
3	Most Intense Negative Affect Observed	+	+	+	-28 42 15*	+
4	Solidarity with Class: Teacher Identifies, Promotes "We" Feeling	+	+	+	+	-85** 20 07
5	Patient and Supportive When Correcting	+	+	+	+	+
6	Students Allowed Choice in Assignments	+	+	+	+	+
7	Accepts Student Ideas and/or Integrates them into Discussion	+	+	+	+	+
8	Admits Own Mistakes; Laughs at Self or Uses Occasion to Teach or Motivate	+	78** -30 22**	+	+	+
9	Usually Bends Close, Gets Down to Child's Level	25 47* 14*	+	+	+	+

Table 5, Continued.

	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
10	Goes to Seats to Check Work; Doesn't Stay at Desk	+	+	+	+	+
11	Usually Speaks to Individuals rather than Whole Class	+	+	+	+	+
12	Uses Advance Organizers in Introducing Activities	+	+	+	+	+
13	Gives Complete, Detailed Instructions; Prevents Errors before They Happen	01 36 10*	+	+	+	+
14	Students Eager to Respond; No Fear	+	+	+	+	+
15	Teacher Waits Patiently if Student Doesn't Respond Promptly	+	44-31 18*	+	+	+
16	Non-Competitive Atmosphere; No Signs of Eagerness to See Others Fail	01	+	+	+	+
17	Students Allowed to Work in Cooperative Groups	+	+	+	+	+

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
18	Teacher Recognized Good Thinking Even When It Doesn't Lead to "Right" Answers	17*	30*	30*	26**	24*
19	Democratic Leadership Style: Students Share in Planning and Decision Making	04	01	28*	01	03
20	Few Restrictions on Students During Seatwork Periods	-02 34 16**	00	19 21 19**	01	00
21	Students Expected to Care for Needs without Getting Permission	22 41 14*	02	08	03	07
22	Teacher Concerned with Substantive Content, not Form, or Student Responses	01	00	11	28**	31*
23	Teacher Stresses Factual Realism, Rejects or Corrects Childish Idealism	00	01	27*	03	01
24	Teacher Credibility: Students Seem to Believe and Respect Teacher	04	18*	14	01	01
25	Showmanship: Teacher is Melodramatic, Expressive, Gushy,	01	01	15	58** -02	00

Table 5, Continued.

Order	<u>Process Variable</u>	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
26	Teacher Gets Attention before Starting, Doesn't Try to Talk over Din	+	+	-05 45*	+	+
		09	07	27*	00	06
27	Chaotic, Unplanned, Poorly Scheduled	+	+	12 -42	46 48*	+
		06	15	26*	24**	27**
28	Teacher Seems Confident, Self-Assured	+	+	13	+	+
		05	22*	00	00	00
29	Politeness: Teacher Regularly Says "Please," "Thank You," etc.	+	+	24*	31**	07**
		00	34**			
30	High Concern about Achievement	+	+	13	+	+
		05	02	00	00	00
31	Room is Attractive	36 45*	55* 14	34 17	+	+
		20**	12*	10*	26**	00
32	Teacher Gives Much Encouragement to Students	+	+	13	+	+
		00	00	01	01	01
33	Room is Uncrowded	+	+	40 50**	60 48*	+
		34**	16**	51**	22**	11**

Table 5, Continued.

Number	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
34	Teacher Explains Rules or Decisions When Reasons aren't Obvious	32 41 16**	53* 07 09	14	00	00
35	Teacher Well Organized, Prepared	50 42 22**	55* 09 10*	14	16*	02
36	Teacher Regularly Monitors Class, Knows What's Going On	34 31 12*	53* 08 10*	05	00	01
37	Smooth, Efficient Transitions, Little Time Wasted	50 47* 24*	64* 15 13	08 37 12*	02	02
38	Monitors Determined "Automatically" by a Systematic Procedure	41 29 14*	56* 16 13*	41 44* 25**	07	03
39	"Busy," Cluttered Classroom	00	00	13	-16 -43*	01
40	Students Compliant, Obedient	07	05	15	01	01
41	Teacher Gives Overly Explicit, Repetitive Directions	77 34**	77 24**	03 51** 31*	-62* -47* 28**	77 45**

Table 5, Continued.

Number	Process Variable	Word	Word	Arithmetic	Arithmetic
		Knowledge	Discrimination		
1	Well Established Routines	+	+	+	-83** 17
	Minimize Interruptions; Room	08	05	07	00
	Runs "Automatically"				01
	A. Time Utilization				
	% Total Time Structured by Teacher	+	+	-10 -43*	+
		01	01	09*	05
	% Structured Time in Language Arts	-50* -14	+	+	02
		00	01	00	00
3	% Structured Time in Math	+	+	21 34	+
		00	00	13*	28**
	% Structured Time in Art	-04 39	+	-09 58**	42 46*
		09*	01	33*	06
	% Structured Time in Spelling	+	+	+	+
		22*	01	27**	39**
	% Structured Time in Reading Groups	38 -33	54* -34	39 -40*	52* -42*
		13*	21**	22**	21**
	% Structured Time in Social Studies	+	+	+	+
		00	01	00	00

Table 5, Continued.

Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
Structured Time in Transitions	+	+	+	+	+
~ Structured Time in Morning Routine	01	02	00	00	00
Structured Time in Special Activities	01	00	06	08	01
Methods Used to Call Attention					
Says Nothing, Waits for Quiet	04	08	-27 45*	01	00
Raps Desk Lightly, Uses Normal Voice	-35 31 12*	01	02	04	05
Gimmick (Light Flick, Bell, Clicker)	06	01	06 -46	04	04
Raises Voice Over the Din	02	07	03	01	02
Raises Voice and Singles Out Individuals	00	00	00	02	00

Table 5, Continued.

Item	Process Variable	Word	Word	Reading	Arithmetic	Arithmetic
		Knowledge	Discrimination		Computation	Reasoning
16	Shouts, Becomes Angry, or Scolds Class	+	+	+	+	+
		00	01	00	03	00
17	Shouts, Becomes Angry, or Scolds Individuals	40 -30 12*	+	+	+	+
		02	02	02	01	20**
18	Whispers or Speaks Softly to Nearby Pupils (at First)	+	+	+	+	+
		20**	61**	22**	04	12 -15
19	Other (includes any method not listed above)	+	+	+	+	+
		01	01	19*	03	01
C. Estimated % of Students Paying Attention						
20		13 16 03*	47* -01 05*	08 21 05*		
				00	00	01
21	D. What Does the Teacher Do When a Child Doesn't Understand Stops What She's Doing, Explains	+	+	-55** -22 06	-58** -41 20	-43 -45*
		02	00			
22	Delays Child then Explains Later	-66* 52** 31**	+	-41 36 19*	-42 35 14*	-55 46*
			00			
23	Delays, But then Fails to Follow Up	-30 -20 05	+	+	+	+
			02	02	00	00

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
24	Asks Another Child to Explain	+ 32**	+ 41*	17 04*	18 13*	+ 83** 03
25	Scolds Child for Not Understanding	+ 00	+ 02	+ 22*	+ 03	+ 00
26	Encourages Child but Gives no Help	+ 04	+ -08 -22 02*	+ 01	+ 05	+ 00
27	Refuses Help ("You're on your own.")	+ 01 51*	+ -13 00	+ 00	+ 05	+ 03
28	Sends Child to Aide or other Adult	+ ND ND	+ ND ND	+ ND ND	+ ND ND	+ ND ND
29	Other (includes any method not listed above.)	+ ND ND	+ ND ND	+ ND ND	+ ND ND	+ ND ND
30	E. Teacher Goes to Child's Desk to Give Help, Doesn't Stay at Desk	+ 04	+ 08	+ 01	+ 05 53** 02	+ 02
31	F. What Teacher Does When Child is Stuck While Reading in Reading Group Gives Word	+ 01	+ 00	+ 02	+ 11	+ 34 26*

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmotic Computation	Arithmetic Reasoning
32	Gives First Sound or Syllable	77 16*	00	00	01	78 32**
33	Child Starts Sentence or Paragraph Over	18 22 04*	00	23**	00	01
34	Gives Context Clue or Definition	20* 01	01	31* 15	-17 52* 15	23* 23
35	Asks Another Child to Give Word	-14 -44* 10	00	18	-29 -61** 23	-02 -56* 26
36	Gives Clue Unrelated to Sound or Meaning ("It's one of our new words.")	-40 45* 22*	00	11	-10 46* 01	-95* 35 07
37	Tells Child to Skip, Go to Next Word	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
38	Other (includes any method not listed above)	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
		+	+	+	+	+

Table 5, continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
	A. Selecting Respondents to Questions				45 -35	
1	1 Preselects Respondent before Asking Question	04	01	00	16*	04
2	2 Calls on Non-Volunteer	02	23**	21*	00	01
3	3 Calls on Volunteer	-27 39 17*	-15 50** 24*	42*	-55** 58** 33**	23
	Student Calls Out Answers	07	32*	26**	55 -39 01	05
	B. Difficulty Level of Questions					
	Process Questions/Process +					
	Product Questions	01	01	10	01	00
	Choice Questions/Process +					
	Product + Choice	01	02	02	06	08
	C. Quality of Children's Answers					
	1 Correct	07	16	39**	-40 -60** 08	34 -44*
	1 Part-Correct	30*	00	13**	22 41* 30**	46**

Table 5, Continued.

Index	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
9	1. Wrong	✓ 24**	✓ 01	✓ 27**	✓ 26*	✓ 02
10	2. "Don't Know"	✓ 31**	✓ 03	✓ 48**	✓ 30**	✓ 33*
11	3. No Response	✓ 27*	✓ 24*	✓ 13	✓ 19** -21	✓ 28**
4. Teacher Reactions to Correct Answers						
12	Praise	✓ 05	✓ 00	✓ 06	✓ 00	✓ 05
17	Criticizing For Calling Out	ND ND	ND ND	ND ND	ND ND	ND ND
15	Failure to Give Feedback	✓ 00	✓ 31	✓ 39**	✓ 27**	✓ 31**
14	Process Feedback	-08 38 15*	✓ 02	✓ 35**	-28 35 11*	-07 47* 21*
15	New Question	-58* 32 17*	✓ 01	-49* -01 11	✓ 01	-79* 12 00

Table 5, Continued.

umber	Process Variable	Word	Word	Reading	Arithmetic	Arithmetic
		Knowledge	Discrimination			
I. Teacher Reactions to Part-Correct Answers						
16	Praise	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
18	Criticism	15 49* 24**	20 17 17*	30 51* 29**	42 21 20*	ND ND ND
19	Failure to Give Feedback	ND ND ND	ND ND ND	ND ND ND	ND ND 1.0	ND ND 1.0
20	Process Feedback	16 28 22**	43 -04 18*	58* 51* 39**	-00	01
21	Gives the Answer	-04 24 21**	51**	24**	04	05
22	Calls on Someone Else	20*	05	22	51**	-98** 10 02
23	Another Student Calls Out the Answer	20	18	51 36 29**	45**	01
24	Repeats, Rephrases, or Asks New Question	44 24 27*	20	22	46*	1.0 6.0* 1.0 54*

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
25	Repeats Question	50 39**	15	42*	34 32*	11
26	Rephrases or Gives Clue	-18 31*	50* 41*	11 43*	11 36	11 50*
27	Asks How Question	20	10	11 41*	11 46**	11 10
E. Teacher Reactions to Wrong Answers						
28	Praise	-60** 10	-01 03	16 17**	11 26*	10 05
29	Criticism	-23 22*	43* 01	16 51*	22 16*	11 11
30	Failure to Give Feedback	ND ND	ND ND	ND ND	ND ND	ND ND
31	Process Feedback	-39 24**	43* 05	16 31**	11 03	11 ND
32	Gives the Answer	75* 36**	27 39**	27* 27	12	11 11

Table 5, Continued.

Number	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
3	Calls on Someone Else	+	+	-0.4* 20 01 05 27*	+	+
4	Another Student Calls Out the Answer	+	+	31 -43* 04 21* 30*	+	+
5	Repeats, Rephrases, or Asks New Question	+	54* -03 01 01	44 -24 17**	+	01
6	Repeats Question	+	+	-30 -30 43** 00 24*	-17 -53** 21*	ND 46*
7	Rephrases or Gives Clue	+	+	+	+	00
8	Asks New Question	+	+	18	04	01
9	Teacher Reactions to "I Don't Know" or No Response Criticism	+	+	17	24*	00
10	Failure to Give Feedback	ND ND 05	ND ND 00	04 46* 17*	06	07

Table 5. Continued.

Order	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
41	Gives the Answer	+	+	+	✓*	+
		09	04	00	19*	01
42	Calls on Someone Else	+	+	+	+	+
		03	00	06	03	00
43	Another Student Calls Out the Answer	-18 -57**	-24 -34	-11 -62**	✓*	-40 -61**
		32**	18*	37**	48**	34
44	Repeats, Rephrases, or Asks New Question	+	+	-37 13	+	+
		44*	10	12*	00	01
45	Repeats Question	14 30	+	51* 18	+	+
		24*	22*	02	01	08
46	Rephrases or Gives Clue	+	+	+	+	+
		06	16	16	00	01
47	Asks New Question	+	+	+	+	+
		53**	39**	32**	19*	ND
48	... Teacher Reactions Combined across All Response Opportunities					ND
	Praise	+	+	+	+	+
		02	01	02	00	02

Table 5, Continued.

	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
62	Failure to Give Feedback	+	77 26**	77 25**	+	77 20**
63	Process Feedback	-19 19**	+	06 31**	-27 11*	-32 24*
64	Call Question	-59** 26 14*	+	01 12	+	-83** 05 0
62	Repeat, Rephrase, or New Question after Failure to Answer Correctly	37 52** 22**	54** 28 13**	77 34**	77 29**	-36 45* 13*
63	Repeats Question after Failure to Answer Correctly	+	77 25*	+	00 00	+
64	Gives the Answer after Failure to Answer Correctly	77 27**	02 48** 23*	40 38 21*	+	+
65	Calls on Another Student after Failure to Answer Correctly	+	+	-11 26*	+	+
66	Another Student Calls Out Answer after Failure to Answer Correctly	03 12*	15 24*	36 34**	-04 09	-37 -40 14*

Table 5, Continued.

	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
1.	Student response opportunities					
2.	Response Opportunities/Total	71	71	-26 47**	-34 54**	-75* 55**
3.	Teaching Time	44**	25*	25*	23**	31*
4.	Student Initiated Questions (SIQ's)					
5.	SIQ's Irrelevant	00	00	00	05	01
6.	SIQ's Called Out	01	00	00	00	03
7.	Praise of Question after Relevant SIQ	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
8.	Criticism of Question after Relevant SIQ	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
9.	Relevant SIQ's Delayed	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
10.	Relevant SIQ's not Accepted	06	-22 44* 05	04	00	05
11.	Relevant SIQ's Given Brief Feedback	-24 -41* 08	71 25	00	06	12

Table 5, Continued.

User	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
65	% Relevant S1Q's Given Long Feedback	54 -56** 32**	11 -44* 06	02	03	42 -45*
66	% Relevant S1Q's Redirected to Class	05	03	05	-78** -02 17**	-85** -19
67	Behavioral Praise of Relevant S1Q	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
68	Behavioral Criticism of Relevant S1Q	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
69	Behavioral Warning after Relevant S1Q	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
70	Criticism of Question after Irrelevant S1Q	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
71	% Irrelevant S1Q Given No Feedback	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
72	% Irrelevant S1Q Delayed	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND

Table 5, Continued.

Order	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
73	% Irrelevant SIC Given Brief Feedback	+	+	+	+	+
		19	30	13	24	19
74	% Irrelevant SIC Given Long Feedback	+	+	+	+	+
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
75	% Irrelevant SIC Not Accepted	+	+	+	+	+
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
76	% Irrelevant SIC Redirected to Class	+	+	+	+	+
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
77	Behavioral Criticism After Irrelevant SIC	+	+	+	+	+
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
78	Behavioral Warning after Irrelevant SIC	+	+	+	+	+
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
79	K. Student Initiated Public Interactions					
	Student Initiated comments and questions/Total Response Opportunities	-07 -49** 12**	02	04 -39* 14	23 -47** 16*	05
80	L. Student Initiated Comments (SIC's % SIC's Relevant)	69* -19 00	00	04	-69 -09 16*	74* -22 05

Table 5, Continued.

Var	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
1	% SIC's Called Out	+	+	02	03	-33 57**
2	Praise or Comment after Relevant SIC	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
3	% Relevant SIC's Given No Feedback	+	+	04	06	06 02
4	% Relevant SIC's Delayed	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
5	% Relevant SIC's Not Accepted	+	+	21	31**	61* -47**
6	% Relevant SIC's Accepted	+	+	01	00	93** 12
7	% Relevant SIC's Integrated into Discussion Topic	-68* 08 04	+	00	-75* 24 23**	-79* 22 01
8	% Relevant SIC's which Cause a Shift in Topic	+	52* -03 03	-40 34 18*	+	01 01

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
29	Behavioral Praise after Relevant SIC's	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
30	Behavioral Criticism after Relevant SIC's	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
31	Behavioral Warning after Relevant SIC's	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
32	Praise of Comment after Irrelevant SIC's	06	08	04	-70* -74 22**	12
33	2 Irrelevant SIC's Given No Feedback	00	21	01	06	ND 05
34	2 Irrelevant SIC's Delayed	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
35	2 Irrelevant SIC's Not Accepted	72* -22 01	71 -10 29**	01	-29 -67** 30*	ND 10
36	2 Irrelevant SIC's Accepted	04	-59 25 20*	00	29**	00

Table 5, Continued.

Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
1. Irrelevant SIC's Integrated into Discussion Topic	+	+	-80* 73	-85** -60	+
	04	15	01	17*	12
2. Irrelevant SIC's Which Cause a Shift in Topic	+	+	+	11 24*	11 12
	01	05	00	24*	12
3. Unfavorable Criticism after Irrelevant SIC's	+	+	+	+	13 14
	01	20	01	01	13 14
4. Unfavorable Warning after Irrelevant SIC's	+	+	+	+	ND ND
	02	23	03	01	ND ND
M. Self and Opinion Questions					
5. Self Questions/Process + Product + Choice Questions	+	+	-34 -39*	+	+
	-22 -43*	04	13**	30**	38**
	14**				
6. Self Questions Which Were Subject-Matter Related	ND ND	ND ND	ND ND	ND ND	ND ND
7. Self Questions Related to Personal Preference	ND ND	ND ND	ND ND	ND ND	ND ND
	ND	ND	ND	ND	ND
8. Opinion Questions/Process + Product + Choice Questions	+	+	+	+	+
	07	28*	10	00	01

Table 5. Continued.

Item	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
105	% Opinion Questions Given					
	No Feedback	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
106	% Opinion Questions Followed by Praise					
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
107	% Opinion Questions Followed by Teacher Disagreement					
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
108	% Student Opinions Accepted					
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
109	% Student Opinions Integrated into Discussion Topic					
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
II. Private Dyadic Contacts						
110	% Private Contacts Student Initiated	✓✓ 18*	✓✓ 01	✓✓ 22*	✓✓ 00	✓✓ 07
111	Student Initiated Work Contacts Involving Praise	✓✓ 31*	✓✓ 27	-49* 05 02	✓✓ 00	✓✓ 19*
112	Student Initiated Work Contacts Involving Criticism	✓✓ 01	✓✓ 00	✓✓ 05	✓✓ 03	✓✓ 08

Table 5, Continued.

Item	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
13	% of Private Work Contacts Student Initiated	+	+	71	+	+
		01	00	24*	05	12
14	% Student Initiated Contacts Delayed	+	+	71	+	-67 -22*
		07	00	30*	10*	17**
15	% Student Initiated Contacts Given Brief Feedback	+	+	71	+	61 51**
		04	00	30**	23*	25**
16	% Student Initiated Contacts Given Long Feedback	+	41 -47**	+	+	31** -26
		02	26**	00	00	02
17	% Student Initiated Contacts involving Personal Concerns	-06 -46**	+	-04 -65**	-06 -13**	-82* -57*
		14**	09	40**	25*	30**
18	% Student Initiated Requests Granted	02 51*	37 45*	-05 52**	27 48*	
		11*	20*	14	09	20**
19	% Student Initiated Requests Delayed	+	+	25 -49**	54 -58*	
		03	05	02	07	22**
20	% Student Initiated Requests Not Granted	+	+	71	+	
		05	05	03	22*	01

Table 5, Continued.

Item	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
21	Private Work Contacts/Private Work Contacts + Public Response Opportunities	23*	-15 -40*	25**	21*	02
22	Procedural Contacts/Procedural Contacts + Response Opportunities	32*	-17 -34 12**	36**	39 -43* 18**	06
23	Teacher Initiated Work Contacts/Teacher Initiated Work + Procedure Contacts	15*	00	02	00	06
24	Teacher Initiated Work Contacts Involving Praise	-52* -17 04	00	-35 -33 18*	31* 02	-43* 06
25	Teacher Initiated Work Contacts Involving Mere Observation	02	22*	06	02	05
26	Teacher Initiated Work Contacts Involving Brief Feedback	00	00	02	01	00
27	Teacher Initiated Work Contacts Involving Long Feedback	-26 -43* 15**	00	38 -51** 24*	36 -63** 30*	06 -41* 16*
28	% Teacher Initiated Procedural Contacts Which Were Management Requests	35*	06	13 -52** 17**	25*	58 -42* 12*

Table 5, Continued.

	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
29	% Teacher Thanks Student for Doing a Favor Request	+	+	+	+	+
30	% Teacher Thanks Student Following a Management Request	52* 23**	-45* 01	15*-49* 23**	-36 20*	-56** 37
	C. Combined Teacher Evaluation Statements					
31	Academic Praise/Academic Praise + Academic Criticism	+	-53* 18**	23 44**	+	+
32	Behavioral Praise/Total Behavioral Contacts	+	+	+	+	+
		01	00	02	17*	27
33	Behavioral Warnings/Behavioral Warnings + Behavioral Criticism	04 09*	37 12**	35 01	37 05	43* 10**
	D. Discipline and Control Errors					
34	% Discipline Contacts Involving One or More Error	+	+	+	+	+
		06	02	05	05	-49**
35	Target Errors/Total Errors	+	+	+	+	+
		02	00	37*	03	04
36	Timing Errors/Total Errors	+	+	-89** 38**	-49 03	+
		05	13			07

Table 5, Continued.

User	Process Variable	Word	Word	Arithmetic	Arithmetic	
		Knowledge	Discrimination			
137	Overreactions/Total Errors	-04 15*	48 22**	07 25**	58* 14	76 15
138	Nonverbal Control Contacts/Total Control Contacts	+	+	+	+	+
C. Continued Teacher Feedback Data						
139	Repeat/Repeat + Rephrase + New Question	-14 42**	-67** 24**	-50 39**	-50* 15*	-50** 44**
140	Rephrase/Repeate + Rephrase + New Question	+	31 14*	40 37**	45 01	45* 10
141	Brief Feedback/Brief + Long Feedback	+	+	-51* 23**	33 20**	-44 17**
		+	+	+	+	+
		+	+	+	+	+
		+	+	+	+	+

Table 5, Continued.

Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
A. Selecting Respondents to Questions					
✓ Preselects Respondent before Asking Question	+	+	+	+	+
	09	15	01	16*	09
Calls on Non-Volunteer	+	+	+	+	+
	02	01	01	01	00
Calls on Volunteer	+	+	+	+	+
	00	00	00	27*	01
Student Calls Out Answers					
	+	+	+	+	+
	01	02	00	18**	29**
B. Difficulty Level of Questions					
Process Questions/Process +	+	+	-55** 23	+	+
Product + Choice	+	+	15*	03	00
Choice Questions/Process +	+	+	10 -43	+	+
Product + Choice	+	+	19*	01	00
C. Quality of Children's Answers					
✓ Correct	+	+	+	+	+
	00	01	00	00	24*
✓ Part-Correct	+	+	+	+	+
	00	04	01	24*	03

Table 5, Continued.

er	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
1	1. Wrong	+	+	+	+	+
2		00	00	01	05	01
3	2. "Don't Know"	+	+	+	+	+
4		02	01	32*	06	01
5	3. No Response	+	+	+	+	+
6		00	00	02	03	-74* -24
7	2. Teacher Reactions to Correct Answers					
8	Praise	+	+	+	+	+
9		00	01	01	00	-77* -03
10	Criticizing For Calling Out	+	+	+	+	+
11		-48* -13	03	01	03	01
12		05	03	01	03	01
13	Failure to Give Feedback	+	+	+	+	+
14		03	03	00	03	01
15	Process Feedback	-05 50**	+	-19 50**	+	33 39
16		23*	02	24**	02	13*
17	New Question	+	+	+	+	+
18		01	00	00	04	00

Table 5, Continued.

Per.	Process Variable	Word	Word	Reading	Arithmetic Computation	Arithmetic Reasoning
		Knowledge	Discrimination			
E. Teacher Reactions to Part-Correct Answers						
6	Praise	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND NE
8	Criticism	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
9	Failure to Give Feedback	03	00	00	-66* -48* 30**	-91** -23 08
10	Process Feedback	61** 54** 31**	36 34 14*	-22 52** 17**	01	10
11	Gives the Answer	02	00	28**	22**	28**
12	Calls on Someone Else	00	01	01	05	09
13	Another Student Calls Out The Answer	-45 -44* 16**	01	-39 -49* 18**	-66** -65** 41**	-91** -40 15**
14	Repeats, Rephrases, or Asks New Question	06	34*	-29 -46* 17**	-54* -42 20**	-24 -50* 17

Table 5, Continued.

ber	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
5	Repeats Question	-52* -49* + 26*	+ 04	-34 66** + 40**	-57* -67** + 40**	-61** -58** + 29**
6	Rephrases or Gives Clue	+ 02	+ 40**	+ 06	+ 03	+ 03
7	Asks New Question	70** 00 + 03	64** -16 + 01	+ 00	+ 01	+ 04
8	F. Teacher Reactions to Wrong Answers					
8	Praise	+ 00	+ 00	+ 05	+ 00	+ 00
9	Criticism	-27 44* + 16**	+ 00	-17 49* + 17**	34 -65* + 31*	-12 -40 + 15*
0	Failure to Give Feedback	+ 01	+ 03	+ 02	+ 01	+ 00
1	Process Feedback	+ 19*	+ 00	+ 35**	48 23 + 11*	+ 07
2	Gives The Answer	+ 38**	+ 42**	+ 23*	+ 26**	+ 46**

Table 5, Continued.

Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
33 Calls on Someone Else	+	+	+	+	+
34 Another Student Calls Out the Answer	+	+	+	+	+
35 Repeats, Rephrases, or Asks New Question	+	+	+	+	+
36 Repeats Question	+	+	+	+	+
37 Rephrases or Gives Clue	+	+	+	+	+
38 Asks New Question	+	+	+	+	+
39 Teacher Reactions to "I Don't Know" or No Response					
39 Criticism	-30 11*	-44* 04	-22 11*	-49* 31**	33 06
40 Failure to Give Feedback	ND ND	ND ND	ND ND	ND ND	ND ND

Table 5, Continued.

Ver	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
1	Gives the Answer	+	+	+	+	-01 -47*
		02	04	00	01	14*
2	Calls on Someone Else	+	-85** 11 22*	+	+	+
		20*		07	01	01
3	Another Student Calls Out the Answer	+	+	07** 17 08	+	+
		00	00	08	05	03
4	Repeats, Rephrases, or Asks New Question	+	64** 07 04	+	+	+
		00	04	18*	01	02
5	Repeats Question	+	+	+	+	+
		00	01	02	03	05
6	Rephrases or Gives Clue	+	+	+	+	+
		20*	47**	22*	16*	25*
7	Asks New Question	57*-17 00	63** 18 10*	+	+	+
				02	01	00
8	H. Teacher Reactions Combined Across All Response Opportunities	+	+	+	+	+
	Praise	01	22*	00	01	03

<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
Failure to Give Feedback	+	-49* -10 03	+	+	+
Process Feedback	02 40 11*	+	18 47* 02 17**	59** 25 11*	+
New Question	+	+	+	+	+
Repeat, Rephrase, or New Question after Failure to Answer Correctly	+	+	-12 -31 01 10*	05	08
Repeats Question after Failure to Answer Correctly	+	+	+	-56** -11 02 10*	-83** -19 06
Gives the Answer after Failure to Answer Correctly	17* 11 17*	+	+	00	04
Calls on Another Student after Failure to Answer Correctly	+	+	+	+	+
Another Student Calls Out Answer after Failure to Answer Correctly	+	+	47* 21 05 28**	02	02

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
1	I. Student Response Opportunities					
7	Response Opportunities/Total	✓✓	-08 42*	+	+	✓✓
	Teaching Time	28**	12*	02	00	26**
8	J. Student Initiated Questions (SIQ's)					
	% SIQ's Irrelevant	+	+	+	++	ND 03
9	% SIQ's Called Out	01	01	05	18*	ND 03
0	Praise of Question after					
	Relevant SIQ	++	+	+	+	+
		ND ND	ND ND	ND ND	ND ND	ND ND
		ND	ND	ND	ND	ND
1	Criticism of Question after					
	Relevant SIQ	++	+	+	+	+
		ND ND	ND ND	ND ND	ND ND	ND ND
		ND	ND	ND	ND	ND
2	% Relevant SIQ's Delayed	+	+	+	-67* 21	+
		05	04	27*	17*	ND 00
3	% Relevant SIQ's Not Accepted	+	+	+	+	+
		ND ND	ND ND	ND ND	ND ND	ND ND
		ND	ND	ND	ND	ND
4	% Relevant SIQ's Given Brief	+	+	+	+	+
	Feedback	02	03	02	22*	ND 03

Table 5, Continued.

	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
5	% Relevant S10's Given Long Feedback	24*	11	10	03	ND ND
6	% Relevant S10's Redirected To Class	04	00	01	04	ND ND
7	Behavioral Praise of Relevant S10	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND
8	Behavioral Criticism of Relevant S10	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
9	Behavioral Warning after Relevant S10	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
10	Criticism of Question after Irrelevant S10	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
11	% Irrelevant S10 Given No Feedback	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
12	% Irrelevant S10 Delayed	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND

Table 5, Continued.

Box	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
3	S Irrelevant SIO Given Brief Feedback	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
4	S Irrelevant SIO Given Long Feedback	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
5	S Irrelevant SIO Not Accepted	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
6	S Irrelevant SIO Redirected to Class	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
7	Behavioral Criticism After Irrelevant SIO	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
8	Behavioral Warning After Irrelevant SIO	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
9	K. Student Initiated Public Interactions Student Initiated comments and Questions/Total Response Opportunities	01	00	07	01	03
0	S SIC's Relevant	21*	23*	03	06	04
			-11 -49**			

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
1	% SIC's Called out	-21 10*	-33 08			
2	Praise or Comment after Relevant SIC		-03 24*	-53** 26**	-03 20*	-37 00
3	% Relevant SIC's Given No Feedback					
4	% Relevant SIC's Delayed					
5	% Relevant SIC's Not Accepted					
6	% Relevant SIC's Accepted					
7	% Relevant SIC's Integrated into Discussion Topic					
8	% Relevant SIC's Which Cause a Shift in Topic					

Table 5, Continued.

ber.	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
1	behavioral Praise after Relevant SIC's	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
2	behavioral Criticism after Relevant SIC's	16 -45* 20*	00	38 -42** 28**	39 -6.5** 33**	-41 40**
3	behavioral Warning after Relevant SIC's	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
4	Praise of Comment after Irrelevant SIC's	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
5	% Irrelevant SIC's Given No Feedback	00	02	07	00	01
6	% Irrelevant SIC's Delayed	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
7	% Irrelevant SIC's Not Accepted	12	27 37 14*	27** 49* 30**	13	12 ND ND
8	% Irrelevant SIC's Accepted	03	01	03	05	05

Table 5, Continued.

Number	Process Variable	Word	Word	Reading	Arithmetic	Arithmetic
		Knowledge	Discrimination	Reading	Computation	Reasoning
57	% Irrelevant SIC's Interpreted into Discussion Topic	-36 -60*	+	-22 -52**	-23 -53*	+
		39**	04	19*	25**	ND
58	% Irrelevant SIC's which cause a Shift in Topic	+	+	+	+	+
		ND ND	ND ND	ND ND	ND ND	ND ND
59	Behavioral Criticism after Irrelevant SIC's	26 -51*	+	67 -60**	29 -60**	+
		24*	01	40**	41**	ND
60	Behavioral Warning after Irrelevant SIC's	+	+	+	+	+
		ND ND	ND ND	ND ND	ND ND	ND ND
B. Self and Opinion Questions		+	+	+	+	+
61	Self Questions/Process + Product + Choice Questions	+	+	01	03	00
		01	27*	01	03	00
62	% Self Questions which Were Subject-Matter Related	+	+	+	+	+
		ND ND	ND ND	ND ND	ND ND	ND ND
63	% Self Questions Related to Personal Preference	+	+	+	+	+
		ND ND	ND ND	ND ND	ND ND	ND ND
64	Opinion Questions/Process + Product + Choice Questions	+	-48* -58**	-34 -43*	+	+
		07	33*	13**	05	ND ND

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
105	% Opinion Questions Given No Feedback	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
106	% Opinion Questions Followed by Praise	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
107	% Opinion Questions Followed by Teacher Disagreement	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
108	% Student Opinions Accepted	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
109	% Student Opinions Integrated into Discussion Topic	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
110	N. Private Dyadic Contacts					
111	% Private Contacts Student initiated	04	00	-01 46** 23*	40 26 10*	04
112	Student Initiated Work Contacts Involving Praise	02	00	00	06	00
113	Student Initiated Work Contacts Involving Criticism	01	00	02	17* 18*	18*

Table 5, Continued.

ber.	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
13	% of Private Work Contacts Student Initiated	+	+	ntv 00	ntv 28** 24*	+
14	% Student Initiated Contacts Delayed	+	+	+	+	+
15	% Student Initiated Contacts Given Brief Feedback	+	+	+	+	+
16	% Student Initiated Contacts Given Long Feedback	+	+	35 -38 18*	00	04
7	% Student Initiated Contacts Involving Personal Concerns	+	+	ntv 02	ntv 24** 19**	+
8	% Student Initiated Requests Granted	tr 31*	+	tr 32*	tr 26**	tr 20*
9	% Student Initiated Requests Delayed	-48* 04 01	+	01	00	01
0	% Student Initiated Requests Not Granted	tr 30**	+	tr 42**	tr 31**	tr 33*

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
121	Private Work Contacts/Private Work Contacts + Public Response Opportunities	+	+	+	+	+
122	Procedural Contacts/Procedural Contacts + Response Opportunities	01	01	05	02	06
123	Teacher Initiated Work Contacts/Teacher Initiated Work + Procedure Contacts	+	+	+	+	+
124	Teacher Initiated Work Contacts Involving Praise	00	00	01	00	01
125	Teacher Initiated Work Contacts Involving Mere Observation	26**	01	-17 23**	-48** 30*	+
126	Teacher Initiated Work Contacts Involving Brief Feedback	-13 38 11*	+	-02 10*	36 32** -50**	-61 14* -38
127	Teacher Initiated Work Contacts Involving Long Feedback	22 45* 11*	+	22 20*	-51** -12 25** -65**	-47 25** -50**
128	% Teacher Initiated Procedural Contacts Which Were Management Requests	01	00	00	00	04

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
129	% Teacher Thanks Student for Doing a Favor Request	+	+	+	+	+
		02	00	00	02	01
130	% Teacher Thanks Student Following a Management Request	+	+	+	+	+
		05	02	22**	24**	25**
Q. Combined Teacher Evaluation Statements						
131	Academic Praise/Academic Praise + Academic Criticism	+	+	+	+	+
		23*	00	47**	27**	25**
132	Behavioral Praise/Total Behavioral Contacts	+	+	+	-53* 07	-84** 09
		00	00	00	11*	00
133	Behavioral Warnings/Behavioral Warnings + Behavioral Criticism	+	+	+	+	+
		00	00	04	06	02
P. Discipline and Control Errors						
134	Discipline Contacts Involving One or More Error	+	+	+	+	82** 00
		03	00	05	00	02
135	Target Errors/Total Errors	+	+	+	+	+
		00	25*	01	02	00
136	Timing Errors/Total Errors	+	-64** -01	+	+	+
		00	01	00	04	05

Table 5, Continued.

Number	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
37	Overreactions/Total Errors	+	06 -57*	+	+	+
		12	14*	11	00	30*
38	Nonverbal Control Contacts/ Total Control Contacts	+	-30 -35	+	+	+
		06	16*	01	00	00
39	Combined Teacher Feedback Data	+	+	+	+	+
	Repeat/Repeat + Rephrase + New Question	+	+	+	+	+
		03	03	01	02	04
40	Rephrase/Repeat + Rephrase + New Question	+	+	+	+	+
		17	37**	18*	00	00
41	Brief Feedback/Brief + Long Feedback	+	+	+	+	+
		22*	00	01	06	09
		+	+	+	+	+
		+	+	+	+	+
		+	+	+	+	+
		+	+	+	+	+

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
	A. Selecting Respondents to Questions					
	% Preselects Respondent Before Asking Question	11 -63**	+	04 -61**	7	7
		34*	05	27*	50**	47**
	Calls on Non-Volunteer	+	+	+	+	+
		00	01	01	02	02
	Calls on Volunteer	+	04 44*	+	7	7
		37**	11*	49**	41**	36**
	Student Calls Out Answers	+	+	+	+	+
		18**	23*	00	00	00
	B. Difficulty Level of Questions					
	Process Questions/Process +	+	55** 04	+	+	+
	Product + Choice	03	05	00	04	00
	Choice Questions/Process +	+	+	+	-60** 32	-81** 35
	Product + Choice	01	04	02	20**	00
	C. Quality of Children's Answers					
	% Correct	-29 -40	+	35 -39	40 -31	90** -39
		16*	01	18*	12*	18*
	% Part-Correct	+	+	7	+	7
		00	01	31*	00	19*

Table 5, Continued.

	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
1	% Wrong	-39 44* 20**	00	01	-60** 36 22**	15 42**
0	% "Don't Know"	01	00	01	00	00
1	% No Response	01	01	00	03	00
2	D. Teacher Reactions to Correct Answers					
2	Praise	00	00	04	00	01
7	Criticizing for Calling Out	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
3	Failure to Give Feedback	00	01	25* 00	00	09
4	Process Feedback	03	00	04 42* 05	04	07
5	New Question	00	00	35 -48* 59** 24**	-26 18**	-25 01

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
II. Teacher Reactions to Part-Correct Answers						
6	Praise	+	+	+	+	+
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
8	Criticism	+	+	+	+	+
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
9	Failure to Give Feedback	+	+	+	+	+
		ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
10	Process Feedback	+	+	-44 45* 22** 00	-52* 23 00	ND ND ND
11	Gives the Answer	-47 46 13*	-50 59** 35*	-47 42 12*	00	ND 01
12	Calls on Someone Else	+	+	-51* 13 01	19* 00	ND 00
13	Another Student Calls Out The Answer	-35 -60** 27*	-35 -46* 13*	37 -56** 28*	ND 28**	ND 56**
14	Repeats, Rephrases, or Asks New Question	+	+	+	+	+
		02	34**	32*	25*	05

Table 5, Continued.

Item	Process Variable	Word	Word	Reading	Arithmetic	Arithmetic
		Knowledge	Discrimination	Reading	Computation	Reasoning
25	Repeats Question	+	+	+	+	+
		01	25*	06	01	01
26	Rephrases or Gives Clue	+	+	58* -21	+	+
		02	00	00	00	02
27	Asks New Question	-11 -51*	+	33 -58**	16 -49*	+
		14*	07	31**	20*	ND 14
F. Teacher Reactions to Wrong Answers						
28	Praise	+	+	+	+	+
		ND ND	ND ND	ND ND	ND ND	ND ND
		ND	ND	ND	ND	ND
29	Criticism	+	+	+	+	+
		00	04	00	07	01
30	Failure to Give Feedback	+	+	+	+	+
		ND ND	ND ND	ND ND	ND ND	ND ND
		ND	ND	ND	ND	ND
31	Process Feedback	+	+	7/1	+	+
		01	00	34**	01	12
32	Gives the Answer	+	+	+	+	+
		05	07	30**	13*	00

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
33	Calls on Someone Else	+	28 41 17*	-41 39 21*	+	-12* -00 01
34	Another Student Calls Out the Answer	+	+	+	+	+
35	Repeats, Rephrases, or Asks New Question	+	+	+	+	+
36	Repeats Question	09 -40 15*	+	-02 -47* 23*	+	+
37	Rephrases or Gives Clue	+	+	65** -19 18*	+	+
38	Asks New Question	+	+	02	48* -02 03	01
C. Teacher Reactions to "I Don't Know" or No Response						
39	Criticism	ND ND	ND ND	ND ND	ND ND	ND ND
40	Failure to Give Feedback	+	60** 16 07	+	+	ND ND 02

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
1	Gives the Answer	+	+	54* 19 04 02	+	+
2	Calls on Someone Else	+	+	+	+	+
3	Another Student Calls Out the Answer	+	+	+	+	+
4	Repeats, Rephrases, or Asks New Question	+	+	+	+	+
5	Repeats Question	+	+	-61** -34 03 08	-56* 10 16** 09	-90* 10 01
6	Rephrases or Gives Clue	+	+	+	+	+
7	Asks New Question	+	+	+	+	+
8	Teacher Reactions Combines Across All Response Opportunities	04	44** 92	06	08	
9	Praise	+	+	+	+	+

Table 5, Continued.

Item	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmotic Computation	Arithmotic Reasoning
9	Failure to Give Feedback	+	+	+	+	+
		00	00	06	01	11
10	Process Feedback	+	+	+	+	+
		02	01	07	03	10
11	New Question	+	+	34 -52** 59** -31	83** -28	
		01	00	27** 29*	02	
12	Repeat, Rephrase, or New Question after Failure to Answer Correctly	+	+	17 -44*	+	81** 07
		03	03	08	02	02
13	Repeats Question after Failure to Answer Correctly	+	+	-46* -25	+	
		02	07	12* 15*	00	
14	Gives the Answer after Failure to Answer Correctly	-41 40	-24 37	+	+	-74* 17
		17**	16*	01	01	00
15	Calls on Another Student after Failure to Answer Correctly	-24 55*	+	-51* 51**	+	-91** 28
		27**	03	30**	01	00
16	Another Student Calls Out Answer after Failure to Answer Correctly	+	-61** 09	+	+	
		21**	05	01	25**	00

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
1	I. Student Response Opportunities					
7	Response Opportunities/Total	+	+	+	+	+
	Teaching Time	02	02	01	01	04
	J. Student Initiated Questions (SIQ's)					
8	% SIQ's Irrelevant	+	+	+	56 23	+
		03	02	43*	14*	ND 20
9	% SIQ's Called Out	+	+	+	+	+
		01	01	03	04	ND 05
10	Rraise of Question after					
	Relevant SIQ	+	+	+	+	+
		ND ND	ND ND	ND ND	ND ND	ND ND
		ND	ND	ND	ND	ND
11	Criticism of Question after					
	Relevant SIQ	+	+	+	+	+
		ND ND	ND ND	ND ND	ND ND	ND ND
		ND	ND	ND	ND	ND
12	% Relevant SIQ's Delayed	+	+	+	+	+
		07	08	00	00	ND ND
13	% Relevant SIQ's Not Accepted	+	+	+	+	+
		-41 -62**	08	05	61* -65**	-65**
		24**			42**	ND 16
14	% Relevant SIQ's Given Brief	+	+	+	+	+
	Feedback	40 60**	52 68**	40 77**	32 66**	66**
		25**	34**	51**	27**	37**

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
55	% Relevant S10's Given Long Feedback	36*	53**	50*	18 -47*	ND
56	% Relevant S10's Redirected To Class	ND ND ND	ND ND	ND ND ND	ND ND ND	ND ND ND
57	Behavioral Praise of Relevant S10	ND ND ND	ND ND	ND ND ND	ND ND ND	ND ND ND
58	Behavioral Criticism of Relevant S10	ND ND ND	ND ND	ND ND ND	ND ND ND	ND ND ND
59	Behavioral Warning after Relevant S10	ND ND ND	ND ND	ND ND ND	ND ND ND	ND ND ND
60	Criticism of Question after Irrelevant S10	ND ND ND	ND ND	ND ND ND	ND ND ND	ND ND ND
61	% Irrelevant S10 Given No Feedback	ND ND ND	ND ND	ND ND ND	ND ND ND	ND ND ND
62	% Irrelevant S10 Delayed	ND ND ND	ND ND	ND ND ND	ND ND ND	ND ND ND

Table 5, Continued.

ber	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
13	J. Irrelevant SIC Given Brief Feedback	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
14	K. Irrelevant SIC Given Long Feedback	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
15	L. Irrelevant SIC Not Accepted	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
16	M. Irrelevant SIC Redirected To Class	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
17	N. Behavioral Criticism After Irrelevant SIC	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
18	O. Behavioral Warning after Irrelevant SIC	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
19	K. Student Initiated Public Interactions Student Initiated Comments and Questions/Total Response Opportunities	31*	01	00	00	01
20	L. Student Initiated Comments (SIC's) SIC's Relevant	00	03	00	00	01

Table 5, Continued.

	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
1	% SIC's Called Out	00	22*	00	02	ND 08
2	Praise or Comment after Relevant SIC	19*	03	05	27**	ND 06
3	% Relevant SIC's Given No Feedback	00	02	00	02	ND ND
4	% Relevant SIC's Delayed	44 39 13*	57 77** 53**	04	77 33**	ND ND
5	% Relevant SIC's Not Accepted	01	00	12*	06	ND 06
6	% Relevant SIC's Accepted	04	04	25*	20	ND 41**
7	% Relevant SIC's Integrated into Discussion Topic	65** 23 10	05	00	00	ND 01
8	% Relevant SIC's Which Cause A Shift in Topic	04	07	17*	07	ND 00

Table 5, Continued.

<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
Behavioral Praise after Relevant SIC's	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
Behavioral Criticism after Relevant SIC's	-46 -48* 23**	ND ND 06	ND ND 02	ND ND 24**	ND ND 32**
Behavioral Warning after Relevant SIC's	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
Praise of Comment after Irrelevant SIC's	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
% Irrelevant SIC's Given No Feedback	-56 -59* 36**	ND ND 01	ND ND 37*	-32 -86** 61**	-78 ND 54**
% Irrelevant SIC's Delayed	ND ND 01	ND ND 12	ND ND 02	ND ND 04	ND ND ND
% Irrelevant SIC's Not Accepted	-64 73* 53**	-54 88** 65**	ND ND 04	ND ND 17	ND ND 06
% Irrelevant SIC's Accepted	ND ND 54**	ND ND 55**	ND ND 65*	ND ND 37*	ND ND 66**

Table 5, Continued.

per	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
7	% Irrelevant SIC's Integrated into Discussion Topic	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
8	% Irrelevant SIC's Which Cause a Shift in Topic	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
9	Behavioral Criticism after Irrelevant SIC's	01	12	02	04	ND ND ND
00	Behavioral Warning After Irrelevant SIC's	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
01	4. Self and Opinion Questions Self Questions/Process + Product + Choice Questions	14*	37**	01	00	01
02	% Self Questions Which Were Subject-Matter Related	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
03	% Self Questions Related to Personal Preference	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
04	Opinion Questions/Process + Product + Choice Questions	02	02	03	05	13

Table 5, Continued.

ber	<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
05	% Opinion Questions Given	-08 -61*	+	17 -59*	44 -78**	+
	No Feedback	34*	02	26*	51**	01
06	% Opinion Questions Followed by Praise	+	+	ND ND	ND ND	ND ND
		ND	ND	ND ND	ND ND	ND ND
07	% Opinion Questions Followed by Teacher Disagreement	+	+	20 53	+	ND ND
		00	00	21* 13	13	ND ND
08	% Student Opinions Accepted	+	+	-59 -47	+	ND
		05	15	24** 07	07	11
09	% Student Opinions Integrated into Discussion Topic	+	+	69* -30	-04 -68**	-68*
		04	01	01 35	35	10 22
10	Private Dyadic Contacts	+	+	+	+	+
	% Private Contacts Student Initiated	38**	63**	07	38**	39
11	Student Initiated Work Contacts Involving Praise	+	+	+	+	+
		27**	17*	00	07	ND
12	Student Initiated Work Contacts Involving Criticism	-28 -48*	+	33 -51*	-24 -66*	+
		09	17*	24** 39**	39**	34

Table 5, Continued.

Number	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	Arithmetic Reasoning
11	% Private Initiated Contacts					
12	Student Initiated	+	+	-10 46*	+	+
		00	01	12*	04	01
14	% Student Initiated Contacts Delivered	09 42	+	-78** 36	+	45
		14*	61*	21*	04	ND
15	% Student Initiated Contacts Given brief Feedback	+	+	15 53**	+	17*
		04	01	20*	09	05
16	% Student Initiated Contacts Given Long Feedback	03 -53**	+	+	+	-46
		15	24*	10	09	ND
17	% Student Initiated Contacts Involving Personal Concerns	+	+	+	+	19*
		07	00	11	11	04
18	% Student Initiated Requests Granted	+	+	00 00	00	ND
		00	00	00	00	04
19	% Student Initiated Requests Delayed	+	+	-71** 29	+	10
		08	08	01	19*	15
20	% Student Initiated Requests Not Granted	-61* -26	-40 -43	-63* -06	-	11
		09	10*	02	00	11

Table 5, Continued.

ber	Process Variable	Word	Word	Reading	Arithmetic	Arithmetic
		Knowledge	Discrimination		Computation	Reasoning
37	Interactions/Total Errors	ND ND ND	ND ND ND	ND ND ND	ND ND ND	ND ND ND
38	Nonverbal Control Contacts/ Total Control Contacts	12 -37 13*	07	00	-31 -34 14*	ND 18
Q. Combined Teacher Feedback Data						
39	Repeat/Repeat + Rephrase + New Question	01	08	07	00	01
40	Rephrase/Rephrase + Rephrase + New Question	11 44**	11 20*	11 19*	11 18*	11 35**
41	Brief Feedback/Brief + Long Feedback	11 33*	11 45*	11 36**	11 35**	11 16*

Table 5, Continued.

ber	Process Variable	Word Knowledge	Word Discrimination	Reading	Arithmetic Computation	arithme Reasoning
21	Private Work Contacts/Private Work Contacts + Public Response Opportunities	01	21*	00	01	01
22	Procedural Contacts/Procedural Contacts + Response Opportunities	02	02	00	00	02
23	Teacher Initiated Work Contacts/ Teacher Initiated Work + Procedure Contacts	32**	37 -69** 32**	03	25**	40*
24	Teacher Initiated Work Contacts Involving Praise	01	20*	05	50 26 16*	10
25	Teacher Initiated Work Contacts Involving More Observation	06	05	00	00	05
26	Teacher Initiated Work Contacts Involving Brief Feedback	22*	22*	03	00	01
27	Teacher Initiated Work Contacts Involving Long Feedback	02	00	32**	35 -47 17*	08
28	Teacher Initiated Procedural Contacts which Were Management Requests	07	04	00	-68* 10 19*	-82* 23 05

Table 5, Continued.

<u>Process Variable</u>	<u>Word Knowledge</u>	<u>Word Discrimination</u>	<u>Reading</u>	<u>Arithmetic Computation</u>	<u>Arithmetic Reasoning</u>
% Teacher Thanks Student for Doing a Favor Request	+	22 -51*	+	+	+
	04	17*	20*	00	01
% Teacher Thanks Student Following A Management Request	+	+	+	+	+
	03	01	02	00	05
D. Combined Teacher Evaluations Statements					
Academic Praise/Academic Praise + Academic Criticism	54* 18	+	+	+	18* 22
	05	02	04	21*	03
Behavioral Praise/Total Behavioral Contacts	+	+	+	+	+
	04	00	06	00	01
Behavioral Warnings/Behavioral Warnings + Behavioral Criticism	+	+	+	-74** 12	48
	00	00	04	01	20*
E. Discipline and Control Errors					
% Discipline Contacts Involving One or More Error	+	+	+	+	+
	04	00	31*	39**	ND 39**
Target Errors/Total Errors	ND ND	ND ND	ND ND	ND ND	ND ND
	ND	ND	ND	ND	ND
Timing Errors/Total Errors	ND ND	ND ND	ND ND	ND ND	ND ND
	ND	ND	ND	ND	ND